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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/082,860	10/19/2001	Arnaud Bourge	PHFR 010027	4949

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS  
P.O. BOX 3001  
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EXAMINER
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AN, SHAWN S

ART UNIT	PAPER NUMBER
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2613

DATE MAILED: 03/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/082,860

Applicant(s)

BOURGE ET AL.

Examiner

Shawn S An

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 November 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6,7,12 and 13 is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5,8-11,14 and 15 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. As per Applicant's instructions as filed on 11/8/04, claims 1-6 and 8-12 have been amended.

### ***Response to Remarks***

2. Applicant's arguments with respect to claims 1-15 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-2 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhu (5,870,146) in view of Kim (5,621,468).

**Regarding claims 1 and 8,** Zhu discloses a device/method for transcoding an encoded signal into a secondary encoded signal, comprising:

a decoding unit (Figs. 2, 6, 9, 10, elements 20, 30) for decoding a current picture of the encoded signal, the decoding unit comprising an inverse Q circuit (Figs. 2, 9, 10, elements 42, 100) for producing a first transformed signal;

an encoding circuit for obtaining the secondary encoded signal comprising a Q circuit (Fig. 10, 78), wherein

the transcoding device (Fig. 10) further comprises a filter circuit (136) between the inverse Q circuit and the Q circuit.

Zhu does not specifically disclose using a recursive filter.

However, Kim teaches motion adaptive spatio-temporal filtering of video signals, utilizing a recursive temporal filter to reduce noise components, and to improve picture quality (col. 1, lines 31-50).

Therefore, it would have been obvious to a person of ordinary skill in the art employing a device/method for transcoding an encoded signal into a secondary encoded signal as taught by Zhu to incorporate a recursive filter as taught by Kim to reduce noise components, and to improve picture quality.

**Regarding claims 2 and 9**, Zhu discloses prediction unit (Fig. 10, 48) for predicting a MC signal (59), and situated between the encoder and decoder, wherein the filter circuit is for receiving the transformed MC signal and the first transformed signal (42), and delivering a filtered transformed signal to the Q circuit (78).

5. Claims 4 and 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zhu (5,870,146) in view of Cheung et al (6,178,205 B1).

**Regarding claims 4 and 10**, Zhu discloses a device/method for transcoding an encoded signal into a secondary encoded signal, comprising:

a decoding unit (Figs. 2, 6, 9, 10, elements 20, 30) for decoding a current picture of the primary encoded signal, the decoding unit comprising an inverse Q circuit (Figs. 2, 9, 10, elements 42, 100) for producing a first transformed signal;

an encoding circuit for obtaining the secondary encoded signal comprising a Q circuit (Fig. 10, 78), wherein

the transcoding device (Fig. 10) further comprises a filter circuit (136) between the inverse Q circuit and the Q circuit; and

prediction unit (Fig. 10, 48) for predicting a transformed MC signal (59), and being situated between the encoder and decoder, wherein the filter circuit is a filter (136) for receiving the transformed MC signal and the first transformed signal (42), and delivering a filtered transformed signal to the Q circuit (78).

Zhu does not particularly disclose the spatial filter for receiving the first transformed signal and for producing a filtered transformed signal.

However, Cheung et al discloses a decoder comprising the spatial filter (Fig. 1, 140) for receiving the first transformed signal (115) and producing a filtered transformed signal (OUTPUT).

Therefore, it would have been obvious to a person of ordinary skill in the art employing a device/method for transcoding an encoded signal into a secondary encoded signal as taught by Zhu to replace the filter with the Cheung et al's spatial filter in such a way that the spatial filter receive the first transformed signal and produce the filtered transformed signal, thereby the filtered transformed signal and the transformed MC signals are delivered to the Q circuit as an alternative arrangement for improving the quality of video signals.

6. Claims 5 and 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zhu (5,870,146) in view of Cheung et al (6,178,205 B1) and Cassereau et al (5,121,191).

**Regarding claims 5 and 11**, Zhu discloses a device/method for transcoding an encoded signal into a secondary encoded signal, comprising:

- a decoding unit (Figs. 2, 6, 9, 10, elements 20, 30) for decoding a current picture of the primary encoded signal, the decoding unit comprising an inverse Q circuit (Figs. 2, 9, 10, elements 42, 100) for producing a first transformed signal;

- an encoding circuit for obtaining the secondary encoded signal comprising a Q circuit (Fig. 10, 78), wherein

- the transcoding device (Fig. 10) further comprises a filter circuit (136) between the inverse Q circuit and the Q circuit; and

- prediction unit (Fig. 10, 48) for predicting a transformed MC signal (59), and being situated between the encoder and decoder, wherein the filter circuit is a filter (136) for receiving the transformed MC signal and the first transformed signal (42), and delivering a filtered transformed signal to the Q circuit (78).

Zhu does not particularly disclose the spatial filter for receiving the first transformed signal and for producing a filtered transformed signal, and an inverse filter.

However, Cheung et al discloses a decoder comprising the spatial filter (Fig. 1, 140) for receiving the first transformed signal (115) and producing a filtered transformed signal (OUTPUT).

Furthermore, Cassereau et al teaches a motion picture coding apparatus comprising an inverse filter (Fig. 1, 20) for inverse filtering filtered signal.

Therefore, it would have been obvious to a person of ordinary skill in the art employing a device/method for transcoding an encoded signal into a secondary encoded signal as taught by Zhu to replace the filter with the Cheung et al's spatial filter in such a way that the spatial filter receive the first transformed signal and produce the filtered transformed signal, and incorporate the Cassereau et al's inverse filter, thereby the filtered transformed signal and the transformed MC signals are delivered to the Q circuit as well as the inverse filtering in the motion predicting stage as an alternative arrangement for improving the quality of video signals.

7. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zhu and Kim as applied to claim 1 above, and further in view of Rosengren et al (6,041,068).

**Regarding claim 14,** The combination of Zhu and Kim does not particularly disclose computer program, which, when loaded to a DVR, causes the DVR to carry out the method claimed in claim 1.

However, Rosengren et al teaches a DVR (Figs. 8A and 8B) comprising a device/method for transcoding (82) an encoded signal into a secondary encoded signal.

Furthermore, the Examiner takes official notice that a computer software program replacing the functions of hardware/device such as an encoder, a decoder, and/or a transcoder is well known in the art for saving costs associated with the hardware/device.

Therefore, it would have been obvious to a person of ordinary skill in the art employing a device/method for transcoding an encoded signal into a secondary encoded signal as taught by Zhu to incorporate Rosengren's teaching as well as the official notice so as to save costs associated with the hardware/device.

8. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zhu and Kim as applied to claim 1 above, and further in view of Vetro et al (6,671,322 B2).

**Regarding claim 15,** The combination of Zhu and Kim does not particularly disclose computer program, which, when loaded to a set top box, causes the set top box to carry out the method claimed in claim 1.

However, Vetro et al teaches a home network (Fig. 8, 801) comprising a set top box (820) substantially connected to a transcoder (850) for transcoding an encoded signal into a secondary encoded signal to accommodate any clients that do not have the capability to decode/display the full resolution content.

Furthermore, the Examiner takes official notice that a computer software program replacing the functions of hardware/device such as an encoder, a decoder, and/or a transcoder is well known in the art for saving costs associated with the hardware/device.

Therefore, it would have been obvious to a person of ordinary skill in the art employing a device/method for transcoding an encoded signal into a secondary encoded signal as taught by Zhu to incorporate Vetro et al's teaching as well as the official notice such that a computer program, which, when loaded to a set top box, causes the set top box to carry out the method (transcoding) claimed in claim 1 so as to save costs associated with the hardware/device.

#### ***Allowable Subject Matter***

9. Claims 6-7 and 12-13 are allowed as having incorporated the allowable subject matter as discussed in the last office action filed on 8/05/2004.

10. Claim 3 is objected to as being dependent upon a rejected base claim 1, but would be allowable: if claim 3 is rewritten in independent form including all of the limitations of the base claim 1 and any intervening claims.

Dependent claim 3 recites novel features comprising an equation (see claim 3).

Accordingly, if the amendments are made to the claims listed above, and if rejected claims are canceled, the application would be placed in condition for allowance.

**Conclusion**

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

13. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Shawn S An whose telephone number is 571-272-7324. The Examiner can normally be reached on Flex hours (10).



SHAWN AN  
PRIMARY EXAMINER  
3/16/05